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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Robert Williams

Application No.: 09/767,884

Filed: January 24, 2001

For: SYSTEMS AND METHODS FOR
ACCESSING AN ADDRESS
TABLE OF A NETWORK
DEVICE

Group Art Unit: 2151

Examiner: Frantz B. Jean

TRANSMITTAL FOR APPEAL BRIEF

U.S. Patent and Trademark Office
Customer Service Window, Mail Stop Appeal Brief-Patents
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

Transmitted herewith is an Appeal Brief in support of the Notice of Appeal filed

December 12, 2005.

Enclosed is a credit card payment (Form 2038) for ☐ \$250.00 ☒ \$500.00 to cover the
Government fee.

The Commissioner is hereby authorized to charge any other appropriate fees that may be
required by this paper that are not accounted for above, and to credit any overpayment, to
Deposit Account No. 50-1070.

Respectfully submitted,

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Date: February 13, 2006



PATENT
Attorney Docket No. F0685

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:)	
)	
Robert Williams)	Group Art Unit: 2151
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Serial No.: 09/767,884)	Examiner: Frantz B. Jean
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)	

APPEAL BRIEF

U.S. Patent and Trademark Office
Customer Window, Mail Stop Appeal Brief – Patents
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

Sir:

This Appeal Brief is submitted in response to the Final Office Action mailed September 12, 2005 and in support of the Notice of Appeal filed December 12, 2005.

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I. **REAL PARTY IN INTEREST**

The real party in interest in this appeal is Advanced Micro Devices, Inc.

II. **RELATED APPEALS AND INTERFERENCES**

Appellant is unaware of any related appeals, interferences or judicial proceedings.

III. STATUS OF CLAIMS

Claims 1-20 are pending in this application. Claims 1-20 are the subject of the present appeal.

IV. STATUS OF AMENDMENTS

No Amendment has been filed subsequent to the Final Office Action mailed September 12, 2005.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Each of the independent claims involved in this appeal is recited below, followed in parenthesis by examples of where support can be found in the specification and drawings for the claimed subject matter. In addition, each dependent claim argued separately is summarized below.

Claim 1 recites: A network device (Fig. 1, 180) connected to a host (Fig. 1, 160) located externally with respect to the network device, the network device comprising: a plurality of receive elements configured to receive data from network stations (page 6, lines 8-18, Fig. 1, 205); a plurality of transmit elements configured to transmit data from the network device (page 6, lines 19-27, Fig. 1, 210); an address table configured to store a plurality of entries (page 10, lines 6-11, Fig. 3, 350); an address register accessible by the host and configured to store an address of one of the entries in the address table (page 9, lines 26-27, Fig. 3, 320); an address table access port accessible by the host and configured to store contents of one of the entries in the address table (page 9, lines 24-26, Fig. 3, 310); and table access logic configured to receive a

command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host (page 9, lines 29-31, page 11, lines 14-25, Fig. 3, 340 and Fig. 6).

Claim 5 recites: The network device of claim 1, wherein the entries include bin entries and heap entries (page 10, lines 6-11 and Fig. 4), at least one of the bin entries including a pointer to one of the heap entries, at least one of the heap entries including a pointer to another one of the heap entries (page 10, lines 12-16).

Claim 7 recites: The network device of claim 6, wherein the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table (page 12, lines 15-33 and Fig. 8).

Claim 8 recites: The network device of claim 6, wherein the table access logic is further configured to receive a modify table entry command from the host, locate one of the entries in the address table to modify using the data from the input data holding register, and overwrite the located entry with the data from the input data holding register (page 12, lines 15-33 and Fig. 8).

Claim 10 recites: The network device of claim 6, wherein the table access logic is further configured to receive a delete table entry command from the host, locate one of the entries in the

address table to delete using the data from the input data holding register, and delete the located entry from the address table (page 13, lines 1-16 and Fig. 9).

Claim 12 recites: A network device (Fig. 1, 180) connected to a host located externally with respect to the network device (Fig. 1, 160), the network device comprising: an address table configured to store a plurality of entries (page 10, lines 6-11, Fig. 3, 350); an input data holding register configured to store data received from the host, the data corresponding to a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table (page 9, lines 27-29, Fig. 3, 330); and table access logic configured to receive at least one of a modify table entry command or a delete table entry command from the host (page 9, lines 29-31), apply a hashing function to the data in the input data holding register, search the address table to locate one of the entries to modify or delete using the hashed data, overwrite the located entry with the data from the input data holding register when the command is the modify table entry command, and delete the located entry from the address table when the command is the delete table entry command (page 12, lines 15-33 and Fig. 8, page 13, lines 1-16 and Fig. 9).

Claim 14 recites: The network device of claim 12, wherein the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table (page 12, lines 15-33 and Fig. 8).

Claim 15 recites: The network device of claim 12, further comprising: an address register

accessible by the host and configured to store an address of one of the entries in the address table (page 9, lines 26-27, Fig. 3, 320); and an address table access port accessible by the host and configured to store contents of one of the entries in the address table (page 9, lines 24-26, Fig. 3, 310).

Claim 16 recites: The network device of claim 15, wherein the table access logic is further configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host (page 11, lines 14-25 and Fig. 6).

Claim 19 recites: A network device (Fig. 1, 180) connected to a host (Fig. 1, 160) located externally with respect to the network device, the network device comprising: an address table configured to store a plurality of entries (page 10, lines 6-11, Fig. 3, 350); an address register accessible by the host and configured to store an address of one of the entries in the address table (page 9, lines 26-27, Fig. 3, 320); an address table access port accessible by the host and configured to store contents of one of the entries in the address table (page 9, lines 24-26, Fig. 3, 310); an input data holding register configured to store data for a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table ((page 9, lines 27-29, Fig. 3, 330); and table access logic (page 9, lines 29-31, Fig. 3, 340) configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one

entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host (page 11, lines 14-25 and Fig. 6), the table access logic being further configured to receive at least one of a modify table entry command or a delete table entry command from the host, locate one of the entries in the address table to modify or delete using the data from the input data holding register, overwrite the located entry with the data from the input data holding register when the table access logic receives the modify table entry command (page 12, lines 15-33 and Fig. 8), and delete the located entry from the address table when the table access logic receives the delete table entry command (page 13, lines 1-16 and Fig. 9).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1-4 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Fukuzawa et al. (U.S. Patent No. 5,247,620; hereinafter Fukuzawa).

B. Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukuzawa in view of Flavin et al. (U.S. Patent No. 6,108,308; hereinafter Flavin).

C. Claim 6-20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukuzawa in view of Lawler et al. (U.S. Patent No. 5,978,951; hereinafter Lawler).

VII. ARGUMENT

A. Rejection under 35 U.S.C. § 102 based on Fukuzawa should be reversed.

The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention always rests upon the Examiner. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed.

Cir. 1992). A proper rejection under 35 U.S.C. § 102 requires that a single reference teaches every element set forth in the claim, either expressly or inherently. See M.P.E.P. § 2131.

1. Claims 1-4

With these principles in mind, claim 1 recites a network device connected to a host located externally with respect to the network device. The Office Action states that bridge 1 is equivalent to the claimed network device and that management node 49 is equivalent to the claimed host (Office Action – page 3). Claim 1 also recites that the network device includes an address register accessible by the host and configured to store data for an entry in the address table. The Office Action states that Fukuzawa discloses this feature and points to col. 7, lines 51-54, Fig. 3 and Fig. 5 of Fukuzawa for support (Office Action – page 3). Appellant respectfully disagrees.

Fukuzawa at col. 7, lines 51-54 discloses that when microprocessor 10 issues commands to address check circuit 20, command codes are stored in a register 106 and parameters are stored in a register 105. This portion of Fukuzawa does not disclose or suggest that either of registers 105 or 106 is an address register accessible by management node 49, as required based on the alleged equivalence between node 49 and the host recited in claim 1. In contrast, microprocessor 10 of Fukuzawa, which is part of bridge 1 may access address check circuit 20, which includes registers 105 and 106. Management node 49, however, does not access either of registers 105 or 106. Figs. 3 and 5 also do not show management node 49 accessing either of registers 105 or 106.

Claim 1 also recites an address table access port accessible by the host and configured to

store contents of one of the entries in the address table. The Office Action states that Fukuzawa discloses this feature and points to col. 7, lines 51-54, Fig. 3 and Fig. 5 for support (Office Action – page 3). Appellant respectfully disagrees.

Fukuzawa at col. 7, lines 51-54, as discussed above, discloses that when microprocessor 10 issues commands to address check circuit 20, command codes are stored in a register 106 and parameters are stored in a register 105. It is not clear which device in this portion of Fukuzawa is believed to be equivalent to the claimed address table access port. In any event, as discussed above, Fukuzawa does not disclose or suggest that either of registers 105 or 106 are accessible by management node 49. In other words, Fukuzawa may disclose registers 105 and 106 store command codes and parameters. Neither of these registers, however, is equivalent to an address table access port accessible by management node 49 in Fukuzawa, as required based on the alleged equivalence between management node 49 and the host recited in claim 1. In contrast, these registers are controlled by commands from microprocessor 10, which is clearly internal to bridge 1.

In addition, register 105 of Fukuzawa stores parameters, register 106 stores command codes and register 107 stores hash addresses (Fukuzawa – col. 7, line 45 to col. 8, line 3). None of these registers in Fukuzawa, or any other registers, is equivalent to an address table access port accessible by the host and configured to store contents of one of the entries in RAM 101, as required by claim 1 based on the alleged equivalence between RAM 101 and the claimed address table. Figs. 3 and 5 also do not provide support for any device in Fukuzawa being equivalent to the claimed address table access port accessible by the host.

Claim 1 further recites table access logic configured to receive a command from the host to insert a new entry in the address table, identify a location in the address table to store the new entry in response to the command, and store the data from the register in the address table at the identified location. The Office Action states that Fukuzawa discloses this feature and points to hash address generator 103, selector 104 and control circuit 102 along with col. 8, lines 16-32 for support (Office Action – page 3). Appellant respectfully disagrees.

Fukuzawa at col. 8, lines 16-32 discloses that microprocessor 10 issues commands to address check circuit 20 to perform address information registration. Once again, claim 1 recites that the table access logic is configured to receive a command from the host. Management node 49 of Fukuzawa, alleged to be equivalent to the claimed host, does not issues commands to address check circuit 20. Fukuzawa, therefore, cannot further disclose or suggest that hash address generator 103, selector 104 or control circuit 102 taken in combination are equivalent to the claimed table access logic that locates an entry in the address table in response to a command from the host, stores an address of a located entry in an address register for access by the host and stores contents of the located entry in an address table access port for access by the host, as required by claim 1. Therefore, Fukuzawa clearly does not disclose any of the claimed address register, address table access port or table access logic recited in claim 1.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 1 under 35 U.S.C. § 102 based on Fukuzawa is improper. Accordingly, reversal of the rejection of claims 1-4 is respectfully requested.

B. Rejection under 35 U.S.C. § 103 based on the combination of Fukuzawa and Flavin should be reversed.

In rejecting a claim under 35 U.S.C. § 103, the Examiner must provide a factual basis to support the conclusion of obviousness. In re Warner, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). Based upon the objective evidence of record, the Examiner is required to make the factual inquiries mandated by Graham v. John Deere Co., 86 S.Ct. 684, 383 U.S. 1, 148 USPQ 459 (1966). The Examiner is also required to explain how and why one having ordinary skill in the art would have been realistically motivated to modify an applied reference and/or combine applied references to arrive at the claimed invention. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

In establishing the requisite motivation, it has been consistently held that the requisite motivation to support the conclusion of obviousness is not an abstract concept, but must stem from the prior art as a whole to impel one having ordinary skill in the art to modify a reference or to combine references with a reasonable expectation of successfully achieving some particular realistic objective. See, for example, Interconnect Planning Corp. v. Feil, 227 USPQ 543 (Fed. Cir. 1985). Consistent legal precedent admonishes against the indiscriminate combination of prior art references. Carella v. Starlight Archery, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985).

1. Claim 5

With the above principles in mind, claim 5 recites that the entries (in the address table)

include bin entries and heap entries, where at least one of the bin entries includes a pointer to one of the heap entries and at least one of the heap entries includes a pointer to another one of the heap entries. The Office Action admits that Fukuzawa does not disclose these features, but states that Flavin discloses these features and points to Fig. 99 and col. 12, line 60 to col. 14, line 3 for support (Office Action – page 4). Appellant assumes that the Examiner intended to refer to Fig. 9 in the rejection since Flavin does not have a Fig. 99. In any event, Flavin does not disclose or suggest the features recited in claim 5.

Flavin at Fig. 9 disclose a data structure of a heap record 930 that includes heap record net pointer 935, heap record from field 940, heap record cost field 945, heap record name field 950, heap record command field 955, heap record argument field 960, heap record previous field 965 and heap record next field 970. Flavin at col. 12, line 60 to col. 14, line 3 discloses that system 100 may include a number of heap records 900 in a heap 999, where the heap records contain information about connects paths between any given source 110 and any given network device 115 and/or sink 120 (Flavin – col. 12, lines 60-66). Flavin, however, does not disclose or suggest that entries in an address table include bin entries and heap entries, as required by claim 5, much less that at least one of the bin entries includes a pointer to one of the heap entries and at least one of the heap entries includes a pointer to another one of the heap entries, as further required by claim 5. In contrast, Flavin merely discloses that a number of heap records may be included in heap 999 and does not distinguish any entries as being bin entries.

Therefore, the combination of Fukuzawa and Flavin does not disclose or suggest each of the features of claim 5.

Further, even if, for the sake of argument, the combination of Fukuzawa and Flavin could

be construed to disclose or suggest each of the features of claim 5, Appellant asserts that the motivation for combining Fukuzawa and Flavin does not satisfy the requirements of 35 U.S.C. § 103. For example, the Office Action states that it would have been obvious to combine Fukuzawa and Flavin “to provide a network device utilizing pointers and heaps for more efficient dynamic routing” (Office Action – page 4). The alleged motivation is merely a conclusory statement providing an alleged benefit of the combination. Appellant asserts that Fukuzawa is directed to a bridge apparatus for interconnecting networks (Fukuzawa – Abstract) and Flavin is directed to dynamic video routing (Flavin – Abstract). These references are unrelated, other than the fact that they both involve routing data. However, Fukuzawa and Flavin are clearly directed to different types of routing and it would not have been obvious to combine features from these disparate references absent impermissible hindsight reasoning.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 5 under 35 U.S.C. § 103 based on Fukuzawa and Flavin is improper. Accordingly, reversal of the rejection of claim 5 is respectfully requested.

C. Rejection under 35 U.S.C. § 103 based on the combination of Fukuzawa and Lawler should be reversed.

1. Claim 6

Claim 6 is dependent on claim 1 and is believed to be allowable for at least the reasons claim 1 is allowable. Accordingly, reversal of the rejection of claim 6 is respectfully requested.

2. Claim 7

Claim 7 recites that the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table. The Office Action admits that Fukuzawa does not disclose this feature, but indicates that “Lawler discloses receiving a modify entry command” (Office Action – page 4). Appellant notes that claim 7 does not recite this feature and the Office Action has not particularly addressed the features recited in claim 7. Therefore, a prima facie case under 35 U.S.C. § 103 has not been established with respect to claim 7.

In any event, claim 7 specifically recites that the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table. Lawler does not disclose or suggest receiving an insert table entry command from a host that is located externally with respect to bridge/router device 10 of Lawler (Lawler – Fig. 1), as required by claim 7. Therefore, even if Lawler was combined with Fukuzawa, the combination would not disclose or suggest the features recited in claim 7.

In addition, even if, for the sake of argument, the combination of Fukuzawa and Lawler could be construed to disclose or suggest each of the features of claim 7, Appellant asserts that the motivation for combining Fukuzawa and Lawler does not satisfy the requirements of 35 U.S.C. § 103. With respect to motivation, the Office Action states “it would have been obvious to combine Fukuzawa and Lawler to provide a more efficient network-switching device utilizing VLAN and the functionality of overwrite” (Office Action – page 4). The alleged motivation for

combining Fukuzawa and Lawler is merely a conclusory statement providing an alleged benefit of the combination. Appellant asserts that the only motivation for combining Fukuzawa and Lawler comes from impermissible hindsight based on Appellant's disclosure.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 7 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claim 7 is respectfully requested.

3. Claims 8 and 9

Claim 8 recites that table access logic is further configured to receive a modify table entry command from the host, locate one of the entries in the address table to modify using the data from the input data holding register, and overwrite the located entry with the data from the input data holding register. The Office Action admits that Fukuzawa does not disclose this feature, but states that Lawler discloses this feature and points to col. 12, lines 9-1 92 of Lawler for support (Office Action – page 4). Appellant notes that it is unclear which portion of Lawler the Examiner intends to reference on page 4 of the Office Action since Lawler at col. 12 only has 67 lines. For purposes of this Appeal, Appellant assumes that the Examiner intended to reference all of column 12 to support the rejection.

In any event, Lawler at col. 12 does not disclose or suggest table access logic configured to receive a modify table entry command from a host located externally with respect to bridge/router network device 10, as required by claim 8, much less locate one of the entries in an address table to modify using data from an input data holding register, as further required by claim 8. Therefore, as a factual matter, the combination of Fukuzawa and Lawler does not

disclose or suggest each of the features of claim 8.

In addition, even if, for the sake of argument, the combination of Fukuzawa and Lawler could be construed to disclose or suggest each of the features of claim 8, Appellant asserts that the motivation for combining Fukuzawa and Lawler does not satisfy the requirements of 35 U.S.C. § 103 for the reasons discussed above with respect to claim 7.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 8 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claims 8 and 9 is respectfully requested.

4. Claims 10 and 11

Claim 10 recites that the table access logic is further configured to receive a delete table entry command from the host, locate one of the entries in the address table to delete using the data from the input data holding register, and delete the located entry from the address table.

The Office Action admits that Fukuzawa does not disclose this feature, but states that Lawler discloses this feature and points to col. 12, lines 9-1 92 of Lawler for support (Office Action – page 4). As discussed above with respect to claim 8, for purposes of this Appeal, Appellant assumes that the Examiner intended to reference all of column 12 to support the rejection.

Lawler at col. 12 does not disclose or suggest table access logic configured to receive a delete command from a host located externally with respect to bridge/router network device 10, as required by claim 10, much less locate one of the entries in the address table to delete using data from an input data holding register, as further required by claim 10. Therefore, as a factual

matter, the combination of Fukuzawa and Lawler does not disclose or suggest each of the features of claim 10.

In addition, even if, for the sake of argument, the combination of Fukuzawa and Lawler could be construed to disclose or suggest each of the features of claim 10, Appellant asserts that the motivation for combining Fukuzawa and Lawler does not satisfy the requirements of 35 U.S.C. § 103 for the reasons discussed above with respect to claim 7.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 10 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claims 10 and 11 is respectfully requested.

5. Claims 12 and 13

Claim 12 recites a network device connected to a host located externally with respect to the network device. Claim 12 also recites an input data holding register configured to store data received from the host, where the data corresponds to a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table.

Fukuzawa, as discussed above with respect to claim 1, discloses that microprocessor 10 communicates with address check circuit 20 to insert or delete information in address RAM 101 (Fukuzawa – col. 7, line 45 to col. 8, line 46). Microprocessor 10, however, is part of bridge 1. Fukuzawa does not disclose or suggest any input data holding register that is configured to store data received from management node 49, which was alleged to be equivalent to the claimed host. Therefore, Fukuzawa does not disclose an input data holding register that stores data received from a host that is located externally with respect to the network device.

Fukuzawa also does not disclose or suggest table access logic configured to receive at least one of a modify table entry command or a delete table entry command from management node 49, as required by claim 12 based on the alleged equivalence of management node 49 to the claimed host device.

Therefore, Fukuzawa clearly does not disclose or suggest either the input data holding register or table access logic recited in claim 12.

Appellant notes that Lawler was not alleged to disclose any of the features of claim 12 and it appears that the Examiner is relying only upon Fukuzawa to reject claim 12 (Office Action – page 4). In any event, Lawler does not remedy the deficiencies in Fukuzawa discussed above. Therefore, Fukuzawa, taken singly or in combination with Lawler, does not disclose or suggest each of the features of claim 12.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 12 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claims 12 and 13 is respectfully requested.

6. Claim 14

Claim 14 recites that the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table. The Office Action admits that Fukuzawa does not disclose this feature, but relies upon Lawler as allegedly disclosing this feature (Office Action – page 4).

Similar to the discussion above with respect to claim 7, Lawler does not disclose or

suggest receiving an insert table entry command from a host that is located externally with respect to bridge/router device 10 of Lawler (Lawler – Fig. 1), as required by claim 14.

Therefore, even if Lawler was combined with Fukuzawa, the combination would not disclose or suggest the features recited in claim 14.

In addition, even if, for the sake of argument, the combination of Fukuzawa and Lawler could be construed to disclose or suggest each of the features of claim 14, Appellant asserts that the motivation for combining Fukuzawa and Lawler does not satisfy the requirements of 35 U.S.C. § 103 for the reasons discussed above with respect to claim 7.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 14 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claim 14 is respectfully requested.

7. Claim 15

Claim 15 recites that the network device further comprises an address register accessible by the host and configured to store an address of one of the entries in the address table and an address table access port accessible by the host and configured to store contents of one of the entries in the address table. The Office Action, with respect to claim 1, states that Fukuzawa discloses these features (Office Action – page 3).

However, as discussed above with respect to claim 1, Fukuzawa does not disclose or suggest that either of registers 105 or 106 is an address register accessible by management node 49, as required based on the alleged equivalence between node 49 and the host recited in claim 15. Fukuzawa also does not disclose or suggest that either of registers 105 or 106 are accessible

by management node 49, as required based on the alleged equivalence between node 49 and the host recited in claim 15. In contrast, these registers are controlled by commands from microprocessor 10, which is clearly internal to bridge 1. Therefore, the combination of Fukuzawa and Lawler does not disclose or suggest each of the features of claim 15.

In addition, even if, for the sake of argument, the combination of Fukuzawa and Lawler could be construed to disclose or suggest each of the features of claim 15, Appellant asserts that the motivation for combining Fukuzawa and Lawler does not satisfy the requirements of 35 U.S.C. § 103 for the reasons discussed above with respect to claim 7.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 15 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claim 15 is respectfully requested.

8. Claims 16-18

Claim 16 recites that the table access logic is further configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host.

As discussed above with respect to claim 1, Fukuzawa does not disclose receiving a command from management node 49 to read one of the entries in an address table. Further, Fukuzawa does not disclose the claimed address register or address table access port, as described above with respect to claim 15. Therefore, Fukuzawa cannot disclose table access

logic configured to store an address of the one entry in the address register for access by the host or store contents of the one entry in the address table access port for access by the host, as further required by claim 16. Lawler also does not remedy the deficiencies in Fukuzawa discussed above. Therefore, the combination of Fukuzawa and Lawler does not disclose or suggest each of the features of claim 16.

In addition, even if, for the sake of argument, the combination of Fukuzawa and Lawler could be construed to disclose or suggest each of the features of claim 16, Appellant asserts that the motivation for combining Fukuzawa and Lawler does not satisfy the requirements of 35 U.S.C. § 103 for the reasons discussed above with respect to claim 7.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 16 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claims 16-18 is respectfully requested.

9. Claims 19 and 20

Claim 19 recites a network device connected to a host located externally with respect to the network device. Claim 19 further recites that the network device includes an address register accessible by the host and configured to store an address of one of the entries in the address table and an address table access port accessible by the host and configured to store contents of one of the entries in the address table. As discussed above with respect to claim 1, Fukuzawa does not disclose or suggest that either of registers 105 or 106 is an address register accessible by management node 49, as required based on the alleged equivalence between node 49 and the host recited in claim 19. Fukuzawa also does not disclose or suggest that either of registers 105 or

106 are accessible by management node 49, as required based on the alleged equivalence between node 49 and the host recited in claim 19. Lawler does not remedy these deficiencies in Fukuzawa.

Claim 19 further recites table access logic configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host. Similar to the discussion above with respect to claim 1, Fukuzawa does not disclose or suggest that any device in Fukuzawa receives a command from management node 49 to read one of the entries in an address table, as required based on the alleged equivalence between node 49 and the host recited in claim 19. Lawler does not remedy these deficiencies in Fukuzawa.

Claim 19 further recites that the table access logic is further configured to receive at least one of a modify table entry command or a delete table entry command from the host, locate one of the entries in the address table to modify or delete using the data from the input data holding register, overwrite the located entry with the data from the input data holding register when the table access logic receives the modify table entry command, and delete the located entry from the address table when the table access logic receives the delete table entry command.

Similar to the discussion above with respect to claim 12, Lawler (or Fukuzawa) does not disclose or suggest receiving either a modify table entry command or a delete table entry command from any host that is located externally with respect to the bridge/router network device 10 of Lawler.

Therefore, the combination of Fukuzawa and Lawler does not disclose or suggest at least

the claimed address register, address table access port or table access logic recited in claim 19.

In addition, even if, for the sake of argument, the combination of Fukuzawa and Lawler could be construed to disclose or suggest each of the features of claim 19, Appellant asserts that the motivation for combining Fukuzawa and Lawler does not satisfy the requirements of 35 U.S.C. § 103 for the reasons discussed above with respect to claim 7.

For at least these reasons, Appellant respectfully submits that the imposed rejection of claim 19 under 35 U.S.C. § 103 based on Fukuzawa and Lawler is improper. Accordingly, reversal of the rejection of claims 19 and 20 is respectfully requested.

VIII. CONCLUSION

In view of the foregoing arguments, Appellant respectfully solicits the Honorable Board to reverse the Examiner's rejection of claims 1-20.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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IX. CLAIMS APPENDIX

1. A network device connected to a host located externally with respect to the network device, the network device comprising:

a plurality of receive elements configured to receive data from network stations;

a plurality of transmit elements configured to transmit data from the network device;

an address table configured to store a plurality of entries;

an address register accessible by the host and configured to store an address of one of the entries in the address table;

an address table access port accessible by the host and configured to store contents of one of the entries in the address table; and

table access logic configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host.

2. The network device of claim 1, wherein the table access logic is configured to receive a command from the host to read a next one of the entries in the address table, locate the next entry in the address table, store an address of the next entry in the address register for access by the host, and store contents of the next entry in the address table access port for access by the host.

3. The network device of claim 2, wherein when locating the next entry, the table access

logic is configured to read an address from the address register to identify a currently addressed one of the entries, read a pointer from the currently addressed entry, and locate the next entry using the pointer.

4. The network device of claim 1, wherein the table access logic is configured to receive a command from the host to read a first one of the entries in the address table, locate the first entry in the address table, store an address of the first entry in the address register for access by the host, and store contents of the first entry in the address table access port for access by the host.

5. The network device of claim 1, wherein the entries include bin entries and heap entries, at least one of the bin entries including a pointer to one of the heap entries, at least one of the heap entries including a pointer to another one of the heap entries.

6. The network device of claim 1, further comprising:

an input data holding register configured to store data corresponding to a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table.

7. The network device of claim 6, wherein the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table.

8. The network device of claim 6, wherein the table access logic is further configured to receive a modify table entry command from the host, locate one of the entries in the address table to modify using the data from the input data holding register, and overwrite the located entry with the data from the input data holding register.

9. The network device of claim 8, wherein when locating one of the entries to modify, the table access logic is configured to read a source address and virtual local area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.

10. The network device of claim 6, wherein the table access logic is further configured to receive a delete table entry command from the host, locate one of the entries in the address table to delete using the data from the input data holding register, and delete the located entry from the address table.

11. The network device of claim 10, wherein when locating one of the entries to delete, the table access logic is configured to read a source address and virtual local area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.

12. A network device connected to a host located externally with respect to the network device, the network device comprising:

an address table configured to store a plurality of entries;
an input data holding register configured to store data received from the host, the data corresponding to a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table; and

table access logic configured to receive at least one of a modify table entry command or a delete table entry command from the host, apply a hashing function to the data in the input data holding register, search the address table to locate one of the entries to modify or delete using the hashed data, overwrite the located entry with the data from the input data holding register when the command is the modify table entry command, and delete the located entry from the address table when the command is the delete table entry command.

13. The network device of claim 12, wherein when searching the address table, the table access logic is configured to read a source address and virtual local area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.

14. The network device of claim 12, wherein the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table.

15. The network device of claim 12, further comprising:

an address register accessible by the host and configured to store an address of one of the entries in the address table; and

an address table access port accessible by the host and configured to store contents of one of the entries in the address table.

16. The network device of claim 15, wherein the table access logic is further configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host.

17. The network device of claim 16, wherein the table access logic is configured to receive a command from the host to read a next one of the entries in the address table, locate a currently addressed one of the entries using the address from the address register, read a pointer from the currently addressed entry, locate the next entry using the pointer, store an address of the next entry in the address register for access by the host, and store contents of the next entry in the address table access port for access by the host.

18. The network device of claim 16, wherein the table access logic is configured to receive a command from the host to read a first one of the entries in the address table, locate the first entry in the address table, store an address of the first entry in the address register for access

by the host, and store contents of the first entry in the address table access port for access by the host.

19. A network device connected to a host located externally with respect to the network device, the network device comprising:

an address table configured to store a plurality of entries;

an address register accessible by the host and configured to store an address of one of the entries in the address table;

an address table access port accessible by the host and configured to store contents of one of the entries in the address table;

an input data holding register configured to store data for a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table;

and

table access logic configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host, the table access logic being further configured to receive at least one of a modify table entry command or a delete table entry command from the host, locate one of the entries in the address table to modify or delete using the data from the input data holding register, overwrite the located entry with the data from the input data holding register when the table access logic receives the modify table entry command, and delete the located entry from the address table when the table access logic

receives the delete table entry command.

20. The network device of claim 19, wherein when locating one of the entries to modify or delete, the table access logic is configured to read a source address and virtual local area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.

Appeal Brief

Application Serial No. 09/767,884
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X. EVIDENCE APPENDIX

None

XI. RELATED PROCEEDINGS APPENDIX

None